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Application no. 10/727,201

August 15, 2005

TO: Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Attn: Art Unit 2883 - Examiner Kianni, Kaveh C

FROM: George O. Saile, Reg. No. 19,572  
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SUBJECT: Serial #: 10/727,201  
File Date: 12/03/2003  
Inventor: Joon Mo Kang  
Examiner: Kianni, Kaveh C  
Art Unit: 2883  
Title: Method of Fabricating Optical Waveguide Devices with Smooth  
and Flat Dielectric Interfaces

#### RESPONSE TO RESTRICTION REQUIREMENT

Dear Sir:

This is in response to the Restriction Requirement in the Office Action dated July 14, 2005. In that office action, restriction was required to one of the following Inventions under

#### CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents P.O. Box 1450, Alexandria, VA 22313-1450 on Aug. 15, 2005.

Signature   
Stephen B. Ackerman, Reg. No. 37,761

Date: Aug. 15, 2005

35 U.S.C. 121:

The inventions stated are:

I - Claims 33-57, drawn to a low loss waveguide device including a buffer layer on top of said waveguide core and a dielectric material surrounding said waveguide core wherein: the top part of said buffer layer has a refractive index substantially close to the refractive index of said dielectric material surrounding said waveguide core, classified in class 385, subclass 129, and

II - Claims 1-32, drawn to a method of forming a substantially planar surface of an optical waveguide including the steps of forming at least one waveguide core portion within at least one cladding portion; and removing at least a portion of the higher cladding exposed portion by a selective removal process selective to the patterned sacrificial portion, classified in class 385, subclass 131.

Applicant provisionally elects to be examined the Invention described by the Examiner as Group II - Claims 1-32, drawn to a process classified in Class 385, subclass 131. This election is made with traverse of the requirement under 37 C.F.R. 1.143 for the reasons given in the following paragraphs.

The Examiner is respectfully requested to reconsider the Requirement for Restriction in the Office Action.

The Examiner gives the reasons for the distinctness between Inventions I and II as (1) that the process as claimed can be used to make other and materially different product, or (2) the product as claimed can be made by another and materially different process (M.P.E.P. 806.05(f)). However, upon reading the process Claims against the product Claims one can readily see that the process Claims are directed to a method of forming "a method of forming a substantially planar surface of an optical waveguide device", and that the product claims are directed to "a low loss waveguide device", and that it is necessary to obtain claims in both the process and product claim language. The process claims necessarily use the product and vice versa. The field of search must necessarily cover both the process class/subclass 385/131 and product class/subclass 385/129, in addition to other related classes and subclasses, to provide a complete and adequate search. The fields of search for Groups I and II are clearly and necessarily co-extensive. The Examiner's suggestion that "the Group I invention can be made of molding proves rather than etching process/removing process as claimed in invention II in which the claimed invention II also can be used to make an optical filtering device rather than an optical waveguide as claimed in Invention I" is speculative and has nothing to do with the Claims as presented in this patent application.

Further, it is respectfully suggested that these reasons are insufficient to place the additional cost of second and third patent applications upon the applicants. Therefore, it is respectfully requested that the Examiner withdraw this restriction requirement for these reasons.

Applicant was further required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable, and that currently no claim is generic.

The species stated are:

A) claims 1-16 directed to a method of forming a substantially planar surface of an optical waveguide device including the step of forming a patterned sacrificial portion over the lower cladding portion and a portion of the higher cladding portion, leaving a second portion of the higher cladding portion exposed;

B) claims 17-27 directed to a method of forming a substantially planar surface of an optical waveguide device including the steps of forming at least one waveguide core portion within at least one cladding portion over a wafer; forming a sacrificial portion, having a different chemical behavior from the cladding portion, over the wafer; removing the sacrificial portion from over the higher cladding portion by a first polarization process, leaving exposed;

C) claims 28-29 are directed to a method of producing at least two waveguide core regions made from dissimilar materials using chemical mechanical polishing, wherein said core regions are integrated on a single substrate;

D) claims 30-32 are directed to a method for producing etch-damage free optical

waveguide structures including the steps of depositing etch buffer layer after waveguide formation; etching of buffer layer except on the top of waveguide; and optionally planarizing the coupling dielectric surface; forming the upper part of a coupling zone by patterning.

Applicant provisionally elects to be examined the species described by the Examiner as Group A, which reads on Claims 1-16. This election is made with traverse of the requirement under 37 C.F.R. 1.143 for the reasons given in the following paragraphs.

The Examiner is respectfully requested to reconsider the Requirement for Election of Species given in the Office Action, because of the increased costs applicant would be forced to bear if the four species are separately examined. Furthermore, the field of search must necessarily cover all species, in addition to other related Classes and subclasses, to provide a complete and adequate search.

Withdrawal of the Restriction Requirement, and allowance of the present Patent Application, is respectfully requested.

It is requested that should there be any problems with this response, please call the undersigned Attorney at (845) 452-5863.

Respectfully submitted,



Stephen B. Ackerman, Reg. No. 37,761